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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,337	09/24/2001	Mutsumi Fujihara	214295US2RD	4635

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EXAMINER

NGUYEN BA, PAUL H

ART UNIT PAPER NUMBER

2176

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/960,337	Applicant(s) FUJIHARA ET AL.	
	Examiner Paul Nguyen-Ba	Art Unit 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 21-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 21-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/24/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice to Applicant

1. This action is responsive to Applicant's Amendments and Remarks filed on 5/17/2005.
2. Claims 1 and 21-39 are currently pending. Claims 1 and 30 are independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 21-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. ("Mori"), U.S. Patent No. 5,806,058, in view of Layden, U.S. Patent Application Publication No. 2002/0065815.

Independent Claims 1 and 30

Mori teaches a data management method and computer readable storage medium for *managing data having an instance of a unit of data, the instance comprising a cell and a façade, the cell comprising managed data* (i.e. "field" → a cell is analogous to a field in database management systems), *the façades* (i.e. "indices") *comprising rows* (i.e. "table" → in database

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management systems all information is stored in the form of tables - tables consist of data arranged in rows and columns.) *indicating correlation among a plurality of instances, the data being logically arranged by a lexicon, pointers to the instances being formed in a context, the instances storing the data and a data retrieval pattern, and addresses of the data retrieval pattern being stored in the contexts and the rows and their relationships* (see Abstract; col. 2 lines 49-67 *et seq.*; col. 3 lines 28-54), comprising:

assigning different facades to each of plurality of storage regions that are discriminated from each other by their addresses (see Fig. 1 item 2 and Fig. 2; col. 3 lines 28-54 *et seq.*); and *registering the rows in the facades assigned to the storage regions that are designated by the address values corresponding to the rows* (see col. 1 lines 4-55, specifically lines 10-21).

Mori does not explicitly teach “forming rows corresponding to the contexts, the contexts comprising address values referring to the storage regions, so that the rows are homologized to each of the address values comprised in the contexts.” However, Layden teaches forming entry fields corresponding to records containing address values wherein a one-to-one homologized correspondence exists between a field and the address of another data element (see [0032]) for the purpose of eliminating redundant entries.

Since Mori and Layden are both from the same field of endeavor, the purposes disclosed by Layden would have been recognized in the pertinent art of Mori. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Mori with the teachings of Layden to include forming rows corresponding to the contexts, the contexts comprising address values referring to the storage regions, so that the rows

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are homologized to each of the address values comprised in the contexts for the express motivational purpose of eliminating redundant entries.

Claims 21 and 31

Mori teaches the data management method and computer readable storage medium with respect to claims 1 and 30 as discussed above, but does not explicitly teach “the facades being managed by sorting the rows with keys for determining a sorting order of the rows, contents of the contexts that comprise the address values corresponding to the rows being used as the keys.”

However, Layden teaches a sort index wherein contents of the contexts that contain the address values can be used as keys (see Fig. 1). All key fields are sorted or indexed as the rows are made into the field for the purpose of locating the desired entry without having to read all the rows in the field (see [0029]). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Mori with the teachings of Layden to include the facades being managed by sorting the rows with keys for determining a sorting order of the rows, contents of the contexts that comprise the address values corresponding to the rows being used as the keys for the motivational purpose of faster database searching and queries.

Claims 22 and 32

Mori teaches the data management method and computer readable storage medium with respect to claims 21 and 31 as discussed above, but does not explicitly teach designating keys for determining the sorting order per row. However, Layden teaches that all key fields are sorted or

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indexed as the rows are made into the field (see [0029]) for the purpose of at all times having an ordered array which can quickly be searched using a search process.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Mori with the teachings of Layden to include that all key fields are sorted or indexed as the rows are made into the field for the motivational purpose of at all times having an ordered array which can quickly be searched using a search process.

Claims 23, 24, 33, and 34

Mori does not explicitly teach wherein contents of storage regions designated by other address values contained in the contexts that contain the address values corresponding to the rows are used as the keys for determining the sorting order of the rows. However Layden teaches an entity field containing an array of addresses, which can be structured as a key field (see [0030]-[0032]) for the purpose of eliminating redundant rows.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Mori with the teachings of Layden to include an entity field containing an array of addresses, which can be structured as a key field for the motivational purpose of eliminating redundant rows.

Claims 25, 26, 35, and 36

Mori does not explicitly teach “the changing of the order of the rows according to need so that the each key for the rows in the facades do not contradict with the sorting order while the

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contents containing the address values of the storage regions designated by the address values are updated.”

However, Layden teaches that the order of rows can be changed (i.e. redundant rows may be removed) for the purpose of defining the relationships among various fields, storage regions, and addresses, to make sure that the indexes do not contradict with the sorting order (see [0032]).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Mori with the teachings of Layden to include the changing of the order of the rows according to need so that the each key for the rows in the facades does not contradict with the sorting order while the contents containing the address values of the storage regions designated by the address values are updated for the motivational purpose of defining the relationships among various fields, storage regions, and addresses, to make sure that the indexes do not contradict with the sorting order.

Claims 27 and 37

Mori teaches *retrieving facades with specified keys* (see Abstract and col. 1 lines 58 *et seq.*).

Claims 28, 29, 38, and 39

Mori teaches *retrieving further facades corresponding to storage regions designated by other address values contained in contexts that contain address values corresponding to rows obtained by the preceding retrieval on other facades* (see col. 3 lines 28-54).

Response to Arguments

5. Applicant's arguments filed 5/17/2005 have been fully considered but they are not persuasive for the reasons submitted above in the discussion of independent claims 1 and 30. Specifically, the claimed structure of the data being managed, is the basic structure of database management systems (DMS) in general, as further evidenced by the Mori reference:

...managing data having an instance of a unit of data, the instance comprising a cell and a façade, the cell comprising managed data (i.e. "field" → a cell is analogous to a field in database management systems), the façades (i.e. "indices") comprising rows (i.e. "table" → in database management systems all information is stored in the form of tables - tables consist of data arranged in rows and columns.) indicating correlation among a plurality of instances, the data being logically arranged by a lexicon, pointers to the instances being formed in a context, the instances storing the data and a data retrieval pattern, and addresses of the data retrieval pattern being stored in the contexts and the rows and their relationships (see Abstract; col. 2 lines 49-67 et seq.; col. 3 lines 28-54).

6. Examiner thanks Applicant for pointing out Examiner's oversight on the IDS filed September 24, 2001. The considered AW reference is now initialed on the IDS and submitted to Applicant.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Nguyen-Ba whose telephone number is (571) 272-4094. The examiner can normally be reached on 11 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on (571) 272-4136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PNB

William L. Bashore
WILLIAM BASHORE
PRIMARY EXAMINER
7/24/2005